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ABSTRACT

This assessment package consists of a checklist for teachers, a checklist for parents, a class record sheet, and a manual designed to be used by teachers to highlight the strengths and weaknesses of individual children soon after their entry into school or during their last term in preschool or kindergarten classes. The Checklist for Teachers provides a list of 62 simple behaviors which indicate an individual child's development and experiences in the areas of social development, emotional development, motor skills, memory and attention and language skills. The form provides space for two subsequent administrations of the items as a followup to the original assessment. The Checklist for Parents contains 38 items describing the child's preschool activities and experiences as well as the parent's expectations of the child's reactions to certain social situations. The Class Record Sheet is a form the teacher can use to summarize the individual child's performance, as well as the performance of the class as a whole on each of the 62 items. The manual provides information regarding the rationale and purpose of the checklists. It includes descriptions of the meaning of the individual items and instructions for the administration and scoring of the instrument. A discussion of the validity and reliability of the Checklist for Teachers is provided in the section reporting research findings. (Author/BD)

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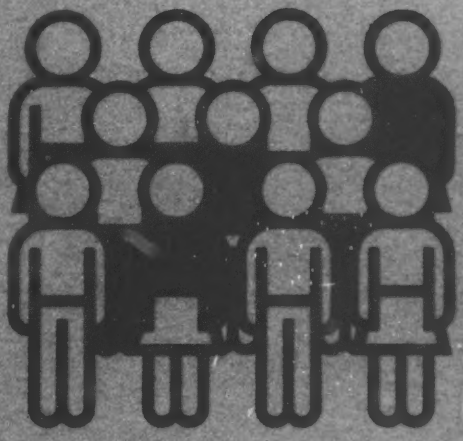

ACER Checklists for school beginners

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Manual

Rationale
Use and interpretation
Administration and scoring
Research findings

PS010358

ACER CHECKLISTS FOR SCHOOL BEGINNERS

MANUAL

Helga A H Rowe

The Australian Council for Educational
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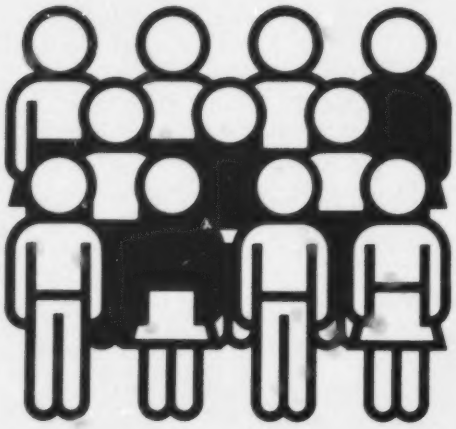
The ACER Checklists for School Beginners comprises
Checklist for Teachers, Checklist for Parents, Class Record Sheet and Manual.

TEACHER



ACER Checklists for school beginners

Child's Name: _____

Boy or Girl: _____

Date of Birth: _____

Year of School Entry: _____

Kindergarten Experience: Yes No

Name of Kindergarten: _____

School: _____

Teacher's Name: _____

Comments: _____

_____

_____

_____

_____

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Place plus (+) in the appropriate column if the item corresponds to your observation of the child's behaviour.

Place minus (−) in the appropriate column if according to your judgment the child does not display the behaviour described by the item. (See 'Administration and Scoring' in Manual for Teachers).

Administration	1		2		3		
Social Development	Date	+/−	Date	+/−	Date	+/−	
1 Tells full name on request							1
2 Tells full address on request							2
3 Is rarely late for school							3
4 Has been absent for no more than 3 days in the past month							4
5 Is responsible for own belongings							5
6 Is not disruptive in class							6
7 Shows an attitude of enquiry							7
8 Is accepted by other children							8
9 Is reasonably patient in awaiting his turn for help from the teacher							9
10 Joins readily in play and in class activities							10
Emotional Development							
11 Appears happy most of the time							11
12 Shares belongings with others							12
13 Shows concern for the distress of others							13
14 Does not cry frequently							14
15 Not overactive							15
16 Not easily distracted from what he is doing							16
17 Accepts changes in activity or routine without undue stress							17
18 Not unduly shy							18
19 Not **over**aggressive							19
20 Laughs at appropriate times							20
21 Can tolerate some frustration or setback							21
22 Does not make undue emotional demands on the teacher							22

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Administration	1		2		3		
Motor Skills	Date	+/−	Date	+/−	Date	+/−	
23 Does not trip over frequently							23
24 Does not bump into people or objects							24
25 Can walk 3-4 metres on toes without touching the floor with heels							25
26 Stands on each leg alternately							26
27 Hops on one leg							27
28 Will voluntarily walk on balance beam							28
29 Has no difficulty doing up buttons							29
30 Has little or no difficulty controlling a writing implement							30
31 Can draw a reasonably straight line of about 10 cm in length							31
32 Can draw a recognizable picture of a house and a man							32
33 Colours in a shape staying within the outline given							33
34 Can cut out a simple shape neatly							34
Memory and Attention							
35 Counts to 10 without error							35
36 Can name from memory, **in any order,** 4 objects which have been exposed to him briefly							36
37 Remembers and repeats 4 names (excluding his own) after hearing them from the teacher only once							37
38 Repeats the names in item 37 in the order in which they were spoken by the teacher							38
39 Can work by himself							39
40 Pays adequate attention							40
41 Follows directions efficiently							41
42 Does not lose interest quickly							42
43 Can occupy himself constructively when he finishes an assigned task							43

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Administration	1		2		3		
Language Skills	Date	+/−	Date	+/−	Date	+/−	
44 Communicates his needs							44
45 Does not rely on gestures or other non-verbal means to make himself understood							45
46 Expresses himself adequately in English							46
47 Is able to name relevant objects in the classroom							47
48 Does not use baby talk							48
49 Speech is clear							49
50 Does not stutter							50
51 Speaks in complete sentences most of the time							51
52 Spontaneously communicates information from home to school							52
53 Attempts to explain things to the teacher or to another child							53
54 Can relate something he has seen or experienced							54
55 Likes to listen to stories							55
56 Answers simple questions on story content							56
57 Participates in class discussion							57
58 Can pronounce consonantal blends correctly in words such as kettle, flag, picture, nest, tree, stamp, brother							58
59 Is able to understand and use prepositions correctly (e.g. to, from, under, above, on, in)							59
60 Understands and can use the word 'not' (e.g. This is white, this is not white)							60
61 Can understand and correctly use comparative words (e.g. small, smaller; large, larger; high, higher)							61
62 Understands and is not confused by the fact that a single word can have different meanings (e.g. orange, sheet, fly, chop, glasses)							62

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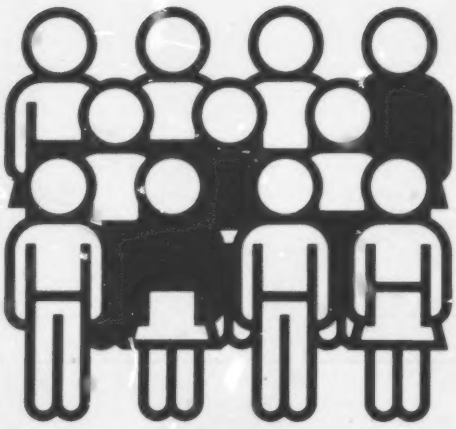
NAME	Date of Birth	Social Development										Emotional Development											
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22

CLASS RECORD SHEET

Motor Skills												Memory and Attention									Language Skills																			Comments
3	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	

PARENT



ACER Checklists for school beginners

Child's Name: _____

Boy or Girl: _____

Date of Birth: _____

School: _____

Teacher's Name: _____

Language spoken at home: _____

Today's Date: _____

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The ACER Checklists for School Beginners comprises Checklist for Parents, Checklist for Teachers, Class Record Sheet and Manual.

To help the teacher know and understand **your child** more quickly and to help him or her settle more happily at school, please complete the following list of statements.

Each school beginner has a special pattern of likes and dislikes, abilities and experiences. If the teacher can know these more quickly and easily, a program can be prepared to allow for the differences between children.

Read each statement carefully and place a tick (✓) under **Yes** or **No** as it applies to your child.

	Yes	No
1 Knows full name		
2 Can tell the name of the street where he lives		
3 Can recognize his own name in print		
4 Understands the dangers of traffic, electricity, fire, water, and high places		
5 Can recognize his own belongings		
6 Talks in sentences		
7 Can make people outside the family understand what he wants		
8 Remembers little songs and rhymes		
9 Dresses himself most of the time		
10 Washes his face and hands himself		
11 Can manage to visit the toilet by himself		
12 Can hear a watch ticking when held near his ear		
13 Can see a straight pin on the floor when standing up		
14 Likes to draw with crayons or paints at home		
15 Has had an opportunity to use scissors at home		
16 Can go short message by himself e.g. to buy a newspaper, sweets, or an ice-cream		
17 Likes to help with little household tasks		
18 Chooses his own TV programme		
19 Watches TV programmes with interest and likes to talk about them		
20 Is interested in looking at books		
21 Likes to have stories read to him		
22 Seems to worry a great deal		
23 Cries very easily when upset		
24 Likes to play with other children		
25 Is very quiet most of the time		

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	Yes	No
26 Really likes best to play by himself		
27 Can manage to look after his own belongings		
28 Is careful when using other children's belongings		
29 Often has temper tantrums when upset or corrected		
30 Is very restless or active, never stays still for a moment		
31 Is rather frightened of new situations		
32 Has been looking forward to school		

Do you think your child will be able to:

33 sit still and listen to the teacher read a story?		
34 listen without interrupting while another child talks?		
35 take turns on playground equipment?		
36 learn the new routine of school?		
37 remember where his bag and coat are kept at school?		
38 make friends at school?		

If you would like to give the teacher any further information, please do so here:

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ACKNOWLEDGMENTS

The *ACER Checklists for School Beginners* and the material presented in this booklet represent the result of several years of research and experimentation.

The trial editions of the Checklists were prepared in response to a request from the Victorian Education Department for a suitable means for the screening of school beginners. Mr T L W Emerson, former Director of Special Services, and Mr R C G Lea, former Deputy Director, provided counsel and encouragement during the preparation of the first versions of the Checklists.

Many teachers and a number of paediatricians and psychologists co-operated in the design of the final product. I acknowledge with gratitude the contributions made by the late Dr V Bielestak and the late Dr G Fong, Dr B Broderick, Mrs P Curtis and Dr M Green.

Special thanks are due to Mr David Holloway, Mr David Mason and Mr W Tymms who allowed the research studies to take place in their inspectorates, and to the many volunteer teachers who administered the items and communicated their results as well as much constructive criticism, also to each one of the 3523 children who were in the research samples.

Finally, I am deeply indebted to my colleagues at ACER, in particular to Mr Robert Davey, who assisted with the analysis of the data and to Mrs Pat Larsen who helped shape the final product.

Contents

	Page
Acknowledgments	iii
List of Tables	vi
General Outline	1
Purpose	1
Rationale	1
Development	3
Description	3
Use and Interpretation	4
Administration and Scoring	6
Social Development	6
Emotional Development	8
Motor Skills	10
Memory and Attention	12
Language Skills	14
Research Findings	19
The Samples	19
Results	19
The Reliability and Stability of the Checklist	21
The Validity of the Checklist	22
Comparison of the Factors obtained from the 1974 and 1975 Analyses	24
Interpretation of Factors	24
Appendix	25
The Checklist for Parents	25
References	25

List of Tables

Table		Page
1	Percentage of Children Obtaining Plus in 1974 and 1975 Samples	18
2	Results of Kolmogorov-Smirnov Tests of Significance between the Cumulative Frequencies of the 1974 and 1975 Samples	19
3	Means and Standard Deviation of Checklist Results According to Age	20
4	Comparison of Mean Scores and Standard Deviations for Boys and Girls in the 1974 and 1975 Samples	21
5	KR-20 Reliability Coefficients	21
6	Loadings of Items on Five Factors from 1974 and 1975 Data Respectively	23

General Outline

Purpose

The teacher, facing a new group of school beginners for the first time, is aware of tremendous individual differences. No matter how well trained and experienced the teacher is, until he or she has built up sufficient knowledge of the personal and developmental characteristics of each one of the children in the group, the teacher is only partly prepared for the task ahead.

There is an immediate need to deal with this inevitable lack of uniformity which exists in every classroom.

The Checklists provide the teacher with a device which will assist in the assessment of aspects of a child's development and experience, which may profoundly influence the pupil's ability to enjoy and profit from school experience. The Checklists aim to detect potential difficulties before they lead to problems which might reduce the child's overall ability to learn and to relate to others.

It is now generally accepted throughout the educational, psychological and medical literature that not all children develop at the same rate or in the same manner. Most of the developmental and experiential discrepancies are not unusually large and can be considered as normal. In some cases, however, these discrepancies may be extreme enough to be immediately or potentially handicapping. The needs of children with very atypical pre-school experience and/or considerable developmental lag must be brought to the immediate attention of the teacher. Such wide discrepancies of development and experience contain the roots of increasing disadvantage.

Modern educational practice is basically committed to the philosophy of individualization. Speedy identification of the particular strengths and weaknesses of each individual child and of the characteristics of the group or class as a whole will allow the teacher to recognize areas in which certain children might profit from special assistance, and can provide a basis for the teacher from which to tailor her training program to the specific needs of the children in her charge.

The Checklists provide a tool for systematic but informal observation. The behaviours assessed are those which sensitive teachers expect to observe in their day by day interaction with the children in their classes. By means of the Checklists, the teacher's acquaintance with important developmental and experiential characteristics of individual children might be accelerated. Areas of need which initially may have been overlooked, can be brought to light, and detailed observations will be available on each child in the group, irrespective of whether he or she has attracted the teacher's attention.

The Checklist is not a test. It is a list of simple behaviours, which provides stimulus content for a completely informal method of assessment of children during regular school activities.

The unstructured approach facilitated by the Checklist method allows the teacher to assess not only the products of the child's performance, but to observe also the processes by which a boy or girl achieves this end product, i.e. how the child organizes himself to act upon the requests made of him. One of the most important signs of disadvantage at school is related less to the deficits shown in one or more areas, than to **how** the child approaches certain tasks. A useful impression of the school beginner's overall efficiency can be gained, for instance, by observations of the ease with which he co-operates.

Rationale

The basic premise underlying the Checklists is the author's belief that early assessment and appropriate intervention provide a viable mode of prevention. Prevention here means minimizing the influence of already existing problem areas and warding off potential difficulties which might have a negative effect on the growth and development of the school beginner.

The *Checklists for School Beginners* provide the teacher with an instrument for the assessment of young children. As has been pointed out previously, they are not a test. A clear distinction can be made between the terms **testing** and **assessment.** Testing implies the administration of a given instrument to an individual or to a group, essentially for the purpose of obtaining a quantitative measurement on one or more characteristics or skills. 'A test is a systematic procedure for observing a person's behaviour and describing it with the aid of a numerical scale or category system' (Cronbach, 1970, p. 26). Guilford (1954) defines testing as '. . . the evaluation of individuals or individual performances on continua representing definable traits and functions' (p. 471). Data resulting from testing defined in this way provide specific quantitative information for samples of the performance of an individual. The following statements illustrate results of such testing.

1 John has a reading age of 9 years 3 months.
2 On the *Wechsler Intelligence Scale For Children* Sally's IQ was 125.
3 Sharon is 1.20 metres tall.
4 Tony can run 80 metres in 11.2 seconds.
5 Sam scored 100% on his spelling test.

Assessment goes beyond quantitative evaluation. It involves obtaining information concerning the individual as an organism interacting with his or her environment. Assessment attempts to explain why an individual behaves in a certain way, or why he or she may have obtained a certain score. Assessment must include qualitative measurement. The following statements are examples of assessment:

1 Stephen does not read well. His poor discrimination between consonant sounds may be related to the reversal problems observed during his reading performance.

2 Robert's time in the race was slow because he made a bad start and did not run in a straight line.
3 Melinda has problems with matching tasks because she does not understand the concept 'same'.
4 Michael has difficulty with exercises involving simple addition and subtraction because he does not understand the concept of number.
5 Kate is restless in class because she seems to be unable to ignore any peripheral noise around her.

The above examples may illustrate why assessment is more likely to lead to the formulation of a diagnosis and why it tends to provide a better basis for appropriate intervention and remediation than testing on its own. Diagnostic information is essential where the aim is the planning of individualized programs. It is also needed by teachers for the identification of children to be referred for more extensive evaluation.

In this age of educational specialization, many teachers assume that diagnostic assessment is a task for the educational psychologist or for another specialist. The Checklists were specifically designed for use by teachers. This plan is based on the premise that the classroom teacher plays the key role in the early identification of children who may be at risk for potential school problems. It must be stressed here, however, that the Checklists are not intended for children with special difficulties. They are intended for the ordinary child, who may develop school problems if the teacher is not alerted to a certain amount of unevenness in the child's development or to the possible unevenness in his or her own provision of opportunities to develop certain essential skills.

The teacher has the power and ability to manipulate the learning environment to suit the specific needs of the children in the class. A close relationship between diagnostic assessment and its translation into a suitable school program is essential. Since the teacher is responsible for the design and the execution of the program, it would seem important that he or she be an active participant in the assessment process.

Rapport between the teacher and the young child is usually stronger than the rapport between children and other adults outside the family structure. This places the teacher in a particularly good position to assess and evaluate objectively, i.e. with relatively minimal affective involvement, the total spectrum of behaviours which characterizes each school beginner.

The rationale underlying the Checklists stands in contrast to that of the traditional global school 'readiness' tests. The latter tests tend to provide information about the child's readiness or developmental status relative to the development and progress of others. The child's performance is measured in terms of a normative group and expressed most frequently as a percentile rank, stanine score or age equivalent. Such norm-referenced assessment classifies the child, i.e. makes an assessment of his standing in comparison with others, usually his peers, but it does not explain his score, nor does it provide guidance in the analysis of the specific educational needs of one child or group of children.

In norm-referenced tests the main goal is to construct a scale that differentiates among children. Items which nearly everyone answers correctly do not distinguish between testees and are therefore eliminated. Similarly, items which everyone misses do not contribute to the measurement made by the norm-referenced test. Such tests do not measure what most people can do, or what they ideally ought to be able to do. They restrict themselves to the assessment of what some can do and others can not. The comparative standing of one individual in relation to another is important when selection or prediction of future success are purposes of the testing.

The purpose of infant testing in Australia is not the selection of children for an insufficient number of places at school. If selection is involved at all, its aim would tend to be to group children. For this purpose, it would seem more meaningful to collect as much descriptive information as possible about each school beginner and his characteristics, than to compare him with others.

The Checklists were designed to assess the child's **current** accomplishments, some of his behaviour patterns, his strengths and his needs, i.e. his adequacy to participate in the school situation. The absolute level of development and the actual skills the child has, determine his ability to cope with the immediate classroom program.

The meaningfulness of scores on the Checklists does not arise from comparing the scores of a particular child with those of his peers, but rather from comparing the number of skills the child performs successfully with those he has not yet attained. The child is not competing for status amongst his peers but his development and his skills are measured against a behaviour-based criterion of success.

The assessment provided by the Checklists is domain-referenced, i.e. it provides the teacher with information relating to the child's accomplishments and needs in a number of relevant domains. A domain consists of a set of skills, abilities or experiences, where the essential attributes of the content which the child is expected to have acquired, and the behaviour through which he or she is expected to demonstrate such skills or abilities are carefully described.

Domain-referenced measurement emphasizes the child's performance on each task, rather than his total score. Specific information is provided concerning what a child can or cannot do in terms of behaviourally defined developmental goals and skills.

The Checklists provide the teacher with both an individual profile for each child and a class profile for each domain. This approach has a number of advantages:

1 It facilitates an understanding of the child's strengths and weaknesses to such a degree that a meaningful analysis of specific educational needs becomes possible.
2 It reflects both intra-individual and inter-individual variability and will thus serve as a basis for curriculum planning and for the selection of teaching strategies.
3 The classprofile assists the teacher in the planning and grouping for selected activities, and in the estimation of resource requirements.
4 Finally, the domain-referenced approach as utilized in the Checklists allows the teacher to receive meaningful feedback concerning an individual's or a group's functioning and/or progress over time, as well as providing feedback to parents and other professionals who may become involved from time to time.

The basic theoretical assumption underlying the design of the Checklists is that maturation and learning are viewed as two mutually complementary components of development. This is in contrast to certain traditional theories which regard maturation as a constant developmental force determining the emerging abilities and behaviour patterns of the child. The latter view would require assessment procedures which can establish whether children have reached the entry requirements specified by a given curriculum or school system.

Research over the past 20 years has shown the strong effect which the early social and physical environments have on the development of the child. The importance of previous learning in cognitive and non-cognitive development is being stressed increasingly. Research into ability and socialization has provided strong evidence for the view that the readiness to learn intellectual skills develops as a result of the child's interaction with his environment. (For details refer to the work of authors such as J. S. Bruner, J. McV. Hunt, Jean Piaget and R. W. White.) Family related factors such as language habits, methods of child-rearing, sets of values etc. have been shown to have a decisive influence on the cognitive and social development of the child and on his adequacy to participate in the school situation.

Development

Item choice was based on the aim to assess developmentally important behaviours and performance skills which may be expected of most five-year-olds. The choice of the domains to be covered by the Checklists was based on a review of the research literature concerned with factors influencing the performance of school beginners. Many developmental and screening tests were examined.

The following five domains were chosen as a basis for Checklist construction: Social Development, Emotional Development, Motor Skills, Memory and Attention and Language Skills. For each of these domains a pool of items was compiled and organized over a period of three months. Extensive item trials were carried out amongst children from areas with widely varying demographic characteristics.

The selection of items to be tried out was based mainly on the judgments of panels of teachers. A number of parents, paediatricians and psychologists concerned with child development and behaviour contributed.

Three major criteria determining the choice of items to be included in the final version of the Checklists were:

(a) the content validity (Messick, 1974) of the item in relation to the immediate school environment in which the child is expected to function,
(b) the results of trial testing, and
(c) the success with which the behaviour assessed by the item identified problems in school beginners according to the reseach literature.

No attempt was made to provide a culture-free instrument. On the contrary, one of the aims of the Checklists is to identify the areas in which a child from a different cultural background might experience disadvantage, so that observed difficulties and deficits may be counteracted as early as possible.

The items of the Checklists were not arranged according to their observed level of difficulty. The presentation of more difficult items in alternation with easier items is expected to have a beneficial effect on the maintaining of motivation throughout the period of assessment.

Description

The *Checklists for School Beginners* consist of the following materials:

Checklist for Teachers
Checklist for Parents
Class Record Sheet
Manual

The items on the Checklists are entirely objective. Neither teachers nor parents are required to make inferential judgments. Observation of the child's behaviour in a number of situations is all that is required.

The *Checklist for Teachers* is made up of 62 items, which are arranged in five broad areas.

Items 1–10 deal with the Social Development of the child, with his ability to function in his environment and to get on with others.

Items 11–22 are concerned with Emotional Development. Emotional stability and adjustment are affected by home and school. The over-tired, over-excited, over-taxed child is predisposed to indulging in undesirable emotional behaviour. Coping emotionally with the demands of school is also related to the child's state of health and the level of physical development.

Items 23–34 assess Motor Skills. Gross motor skills, physical balance, manipulatory skills and hand-eye co-ordination are observed.

Items 35–43 are concerned with factors related to Memory and Attention. Memory is a basic component of all aspects of learning. A child with difficulty in this area may be severely handicapped in a variety of ways. Attention involves the capacity and discipline of concentrating on a specific task or purpose. Many young children find it difficult to keep their attention on any object or activity for more than a few minutes.

Items 44–62 deal with Language Skills. Expressive language and language comprehension are judged independently and jointly. Enunciation and a number of grammatical skills are assessed.

The Checklists have been designed to provide a simple and direct method of recording observations. For each item the score is **plus (+)** or **minus (–)** depending on the child's performance. The places available for the recording of responses are arranged in columns. The three columns available on the *Checklist for Teachers*, make provision for two re-administrations of the instrument.

The *Checklist for Parents* contains 38 items and a provision for the parent to convey to the teacher additional information concerning the child. In this Checklist the child's parent is invited to mark a number of brief statements as **True** or **Not True** depending on how he or she perceives the child's development in a number of areas. Thirty-two of the statements describe pre-school activities and experiences. Six of the statements require the parent to express an opinion based on his or her expectation of the child's reaction to certain social situations.

Use the *Checklist for Parents* is optional. Although there is some overlap, the *Checklist for Parents* tends to provide information which can not be observed by the teacher. It therefore supplements and, in some ways, validates the impressions gained by use of the *Checklist for Teachers*.

A number of teachers have found that the *Checklist for Parents* provides a useful initial approach to parents and that it has made it easier to establish contact with the child's home. The *Checklist for Parents* is available in eight languages (i.e. Arabic, Greek, Italian, Maltese, Serbo-Croatian, Spanish and Turkish in addition to English).

The *Class Record Sheet*, which accompanies the Checklists provides for a concise summary of results relating to the *Checklist for Teachers*. It makes provision for the listing of children's names on the left side. The numbers of the Checklist items are printed across the top of the sheet. As on the individual Checklist, a **plus** sign indicates that the statement contained in the respective items is correct for the child, a **minus** sign indicates that the child has not been observed to exhibit the behaviour described in the item.

The profile of each individual child can be determined by inspection of the rows of the *Class Record Sheet*. The columns indicate the class profile for each Checklist item. The *Class Record Sheet* was thus designed to reflect the two major goals of the Checklists. It provides the teacher with an easily and quickly consulted profile of each child's developmental strengths and weaknesses and at the same time summarizes class performance in a variety of important areas.

The *Manual* provides information regarding the rationale and purpose of the Checklists. It includes detailed descriptions of the meaning of each item and instructions for the administration and scoring of the instrument. A discussion of the validity and reliability of the *Checklist for Teachers* is provided in the section reporting research findings.

Use and Interpretation

Use

The Checklist should be administered by, or under the direction of, a professionally trained and experienced teacher. The administration of the items should be as informal as possible.

Most of the items of the Checklist are single task activities. Each item is scored **plus (+)** or **minus (–)** depending on whether the child does or does not perform the activity. Detailed explanations of the meaning of each item and specific criteria for scoring are provided in the following chapter. These should assist in the interpretation of each child's performance.

To simplify scoring procedures all items have been expressed in such a way that a **plus (+)** provides the desirable response. This has resulted in a number of double negatives and increases the necessity to read each item carefully before administration. It is recommended that the teacher study this handbook in its entirety to become familiar with the aims, the directions for administration and the interpretation of the Checklist before making use of the instrument.

Use of the Checklists may be made at different points in time. The purpose of administration naturally affects the way in which the instrument is used.

The Checklists can be expected to provide useful information before the child is known to the teacher, i.e. at an early visit to the school, at an enrolment interview with the teacher or the vice-principal, or at various points during the first months at school, e.g. when the question of grouping or regrouping arises.

Many pre-school teachers and play-group leaders wish to make a preliminary assessment of the development and the range of skills of their children well before the beginning of school.

The beginning of the last term at pre-school or kindergarten may be an appropriate time to administer the Checklists and in this way identify those children

who may require extra help and selected educational experiences. The assistance of parents may be enlisted for this purpose.

A routine administration of the Checklists at school entry or after the first few weeks of schooling may provide much additional information to the teacher and can be expected to contribute to a smooth settling into the years of schooling for the individual child.

When used with a class or group of children the Checklists may be administered over a period of time. **There is no need to administer the items in the order in which they appear on the list.** It is suggested, however, that each section in turn be filled in for all children in the class, rather than that one child after another is assessed on the complete Checklist.

The **appropriate time to fill in the Checklist** should be determined by the teacher who uses it. If the Checklists are used for grouping it is suggested that the first administration should not take place before the sixth week of the first term.

The record form makes provision for two re-administrations to allow for convenient observation of developmental progress. It is suggested that as a rule, on second and subsequent administrations only items previously not scored **plus** be re-administered. Under special circumstances, e.g. in the case of a child who returns to school after a prolonged and serious illness, after a road accident or other trauma which may have resulted in a certain amount of regression, the re-administration of the total Checklist or a major part of it is recommended.

If the Checklists are used as a screening instrument after the children have been attending school for some months, it is not necessary to administer the instrument to every child in the class. Most children will have made a satisfactory adjustment to school. Assessment of the children who are of special concern to the teacher or about whom the teacher is not sure (some children are very quiet and tend not to draw attention to themselves) will provide useful information.

As mentioned previously, the Checklist makes provision for re-assessment when the Checklists have been administered as a routine procedure early in the child's school career. It is recommended that the early assessment be checked and that the child's records be brought up to date some time later. This should certainly happen before the end of the first year of schooling to avoid the danger of labelling children. A most harmful effect of the Checklist would be if it were used to group 'low scoring' children to a relatively permanent status, especially with the concomitant failure to design compensating instruction. One of the aims of the Checklists is to reduce inequality of opportunity for a smooth adjustment to school life amongst school beginners. A **misuse** of the instrument would be to label the child who receives a low score as 'slow' and to place him into a group in which all children uniformly receive instruction 'aimed at their level'. The consequence of such a strategy may be that low achievement of these children is virtually guaranteed.

Poor Checklist performance may be a reflection of developmental and/or cultural differences rather than of inferior capacity. Potentially able children from culturally different backgrounds may therefore be expected to show substantial improvement on readministration of the Checklist, even at the end of Term 2.

Interpretation

The effectiveness and economy of the Checklists is dependent on an understanding of their aims and limitations.

The following points of caution may prevent users of the Checklists from over-interpreting the results they obtain:

1. The items on the Checklists should be considered as samples only of the types of behaviours and situations which comprise the life experience of the pre-school child. As such, the child's profile, i.e. the pattern of **plus** and **minus** scores obtained, must be interpreted as symbolic of the child's developmental level rather than as absolute developmental achievements or deficits in themselves.
2. The behaviours covered by the items of the Checklists are not equal in significance. Certain single items may be more indicative than others of serious problems. Certain clusters of items may be regarded as having a greater diagnostic value than others in relation to particular groups of children.
3. The Checklists do not diagnose the nature or cause of problems, but merely indicate the need for special attention and further observation. Similar, or even identical profiles can not be regarded as an indication of identical causes or underlying problems.
4. Performance scores for individual children should not be converted into percentiles. The items were not designed to yield a classroom distribution but rather to enable most children to score **plus** on the majority of items.
5. The only interpretation which can legitimately be made concerning the child's profile is that he or she may need special attention in one or more areas, or that he or she has not been so identified.
6. Failure to master a number of skills at the age of five or six years does not necessarily prevent a child from making progress at school in general, nor in learning to read in particular. It may, however, prevent him from profiting maximally from early school experience.

In the light of the above points, it is important to realize that a realistic appreciation of a child's strengths

and weaknesses requires the teacher to evaluate the Checklists profile in relation to other variables relating to the personality, background and environment of the particular child. Only in this way can the profile become the basis for valid intervention.

A score can be determined for each child for each of the five developmental sub-sections and for the total Checklists, by summing the **plus** responses. It must be remembered, however, that such an addition of scores does not really produce an interpretable measure. A sum of **plus** or **minus** scores does not represent a measurement on a particular trait, or a global 'readiness' score. The sum of **plus** or **minus** scores on the Checklists provides simply a count of the number of behaviours observed on a particular child that need or need not require special attention from the teacher.

It is quite natural for the user of the Checklists to be looking for a table of norms so that each child's score can be compared with a distribution of scores observed by assessing other children who may be regarded as a normative group. No such tables are presented in this handbook. Instead, a table giving the percentage of children scoring **plus** and **minus** on each item is presented to illustrate research results obtained by use of the Checklists (cf. Table 1).

It is important that teachers are continuously aware that the total score of a single child cannot be interpreted meaningfully, as such a score could stem from a variety of different profiles. It is the rows and columns on the class record sheet, i.e. the profiles indicating the strengths and weaknesses of each individual child and the class profiles relating to each item, which provide the teacher with a basis for specific and general planning.

A child with many **minus** scores is likely to need more individual attention and assistance at school. However, it is quite possible that, given time, the child would mature without special intervention. Certain developmental patterns and cultural experiences facilitate the spontaneous acquisition of school-relevant skills and behaviours.

Similarly, the mean number of **plus** or **minus** scores obtained by a class or group of children is unimportant in comparison with the discovery of what exactly the children in a group can or cannot do in areas in which the teacher is able to help, or is able to counsel willing parents to help their children.

Teachers may find it desirable to adapt and/or supplement the items provided in the Checklists with a series of items of their own. The usefulness of the current instrument will be enhanced if it is adapted by the teacher to the goals he or she has developed for a particular group of children. Ideally, the Checklists should include items which reflect the special character of the children to whom it is administered, the kind of home and environment in which they are growing up, as well as the teacher's own philosophy of early education.

Administration and Scoring

Social Development

Item 1 Tells full name on request

Descriptor: Tells first name and surname when asked. If the child gives first name only, ask: 'What is your other name?'.

Score minus if: the child cannot respond with both names unless the following qualification applies:

Qualification: Children from some national groups, e.g. Indonesia, may have one name only. The teacher should check the admission form in cases of doubt.

Item 2 Tells full address on request

Descriptor: When asked 'Where do you live?' or 'What is your address?' the child should give house or flat number, street and suburb. (Allow two prompts to elicit suburb if address is not complete.)

Score minus if: the child fails to give his address when adequately encouraged subject to the qualifications listed below:

Qualifications: (a) In rural districts the name of the town or district may suffice, or the name of the parents' property and the district;
(b) For children living in a hostel or an institution, the name of the institution is sufficient.

Item 3 Is rarely late for school

Descriptor: Habitual lateness for whatever reason, even though the teacher feels that lateness is the fault of the mother or for other family reasons. Reasons may be useful to know for intervention purposes but missed class time is the concern of this item.

Score minus if: the child
(a) is late regularly once a week or more;
(b) is habitually slow to re-enter the classroom after play, luncheon, or toilet breaks.

Item 4 Has been absent for no more than three days in the past month

Descriptor: All absences must be counted, including those for which an explanation has been received such as illness, parental holidays, etc. Such absences may affect the child's school performance, and/or reflect the parents' attitude towards school.

Score minus if: the child is absent for a total of three full days, including half-day absences, in the past four weeks.

Item 5 Is responsible for own belongings

Descriptor: The child
(a) recognizes most of his own belongings;
(b) can put his personal possessions in the appropriate place and retrieve them with minimal help, e.g. hanging up clothes, placing belongings in his chair-bag or locker.

Score minus if: the child
(a) is unable to identify his own bag, lunchbox, clothes, etc;
(b) leaves an important article at home or at school at least once a week;
(c) the parent makes frequent enquiries regarding lost or forgotten articles.

Item 6 Is not disruptive in class

Descriptor: The child's behaviour does not interfere with the normal classroom program.

Score minus if: two or more of the following behaviours are noted as regular patterns of behaviour or are sufficiently frequent to disturb normal class procedures;
(a) unprovoked aggression towards other children or towards the teacher;
(b) noticeable inability to take turns either in the use of materials or in attracting the teacher's attention;
(c) an inability to carry out any small task without disturbing others;
(d) constant movement about the classroom without showing sustained interest in any of the available activities;
(e) frequently disturbs the work/play of other children in a negative way.

Item 7 Shows an attitude of enquiry

Descriptor: The child is interested in the activities of the classroom and shows curiosity in the things novel and/or unfamiliar to him. He asks spontaneous questions, is eager to attempt new activities and shows reasonable persistance in any attempt to use unfamiliar toys and materials in a positive way.

Score minus if: (a) the child constantly shows lack of interest;
(b) fails to respond in a positive way to new activities or materials, which are interesting to the rest of the class;
(c) his responses to almost all activities are random and/or aimless.

Item 8 Is accepted by other children

Descriptor: The other children show friendliness towards the child and are willing to include him in work/play groups.

Score minus if: (a) most other children refuse to allow the child to join spontaneous group activities;
(b) the child is almost always left out when children choose partners or groups or offer turns;
(c) the child is obviously isolated for long periods of time without being approached by other children and asked to join them.

Item 9 Is reasonably patient in awaiting his turn for help from the teacher

Descriptor: The child can wait his turn for attention and does not disturb others when unable to get the teacher's immediate attention.

Score minus if: the child
(a) cannot tolerate waiting and therefore continually interrupts by calling out;
(b) disturbs and/or interferes with other children if he has to wait for attention;
(c) usually 'gives up' an activity if his demands for attention are not met immediately.

Item 10 Joins readily in play and in class activities

Descriptor: The child joins freely in any activities when requested by the teacher or other children.

Score minus if: the child
(a) shows consistent lack of spontaneous co-operation;
(b) shows reluctance to join in whenever requested;
(c) refuses completely to join in any activities.

Emotional Development

Item 11 Appears happy most of the time

Descriptor: The child appears to enjoy a sense of well-being and contentment. He is seldom tearful or dejected.

Score minus if: the child
(a) after the first few days cries when entering school;
(b) is withdrawn and appears apprehensive of school activities;
(c) seems unduly sulky and non-co-operative for most of the time.

Item 12 Shares belongings with others

Descriptor: The child allows other children to use his belongings and plays co-operatively with class toys and materials.

Score minus if: the child
(a) cannot tolerate sharing his belongings such as crayons, toys, etc.;
(b) will not allow other children to join him in an activity which involves sharing the materials.

Item 13 Shows concern for the distress of others

Descriptor: The child comforts and helps a child who is crying, who has fallen and hurt himself, or who has been left without adequate toys or materials.

Score minus if: the child
(a) never shows interest in or involvement with anyone in distress;
(b) laughs inappropriately at distress situations in stories or on television.

Item 14 Does not cry frequently

Descriptor: The child does not cry without an apparently sufficient reason.

Score minus if: the child cries several times a day. Score minus **only** after taking into consideration the circumstances in each particular situation.

Item 15 Not overactive

Descriptor: The child's activity level does not interfere with his ability to cope with the demands of the group situation.

Score minus if: behaviour includes one or more of the following:
(a) constant moving from one activity to another without achieving any positive results;
(b) inability to remain seated for a reasonable period of time;
(c) moves about too quickly and in a disorganized manner both in the classroom and the playground.

Item 16 Not easily distracted from what he is doing

Descriptor: The child can become absorbed in an interesting task, e.g. painting, puzzles, or block-building, and can resist distractions either by interference from other children or by activities going on around him. He can return and finish a task after an interruption.

Score minus if:
(a) any slight interruption causes the child to lose interest and change activity;
(b) the child is unable to return to a task after being distracted;
(c) the child is constantly watching other children rather than being involved with the activity in hand.

Item 17 Accepts changes in activity or routine without undue stress

Descriptor: The child can tolerate minor upsets in classroom activity and occasional changes in routine.

Score minus if: the child
(a) shows strong reaction, e.g. by tears, by uncooperative behaviour or unusual clinging behaviour if the normal routine is upset or if some regular activity is omitted;
(b) shows signs of overanxiety in anticipation of, or during, excursions, e.g. sudden onset of thumbsucking, tears, withdrawn behaviour, sudden hyperactivity;
(c) is over-timid and anxious in approaching novel or strange activities despite the fact that reasonable support is given.

Item 18 Not unduly shy

Descriptor: The child is sufficiently confident to make his needs known to the teacher and to approach and interact with other children in a play situation.

Score minus if: the child
(a) refuses or is very reluctant to talk with children, the teacher, or other minding adult even when approached in a supportive manner;
(b) shows signs of uneasiness or panic when approached by the teacher or other children;
(c) is unable to approach the teacher or peers to make his needs known, e.g. for toileting, for materials, or other assistance;
(d) shows an attitude of helplessness or extreme passivity in almost all situations.

Item 19 Not over-aggressive

Descriptor: The child does not respond with more aggression than the situation requires.

Score minus if: the following types of behaviour are observed:
(a) an inability to share materials without fighting or arguing;
(b) a tendency to hit, push, or scratch if even moderately frustrated by another child;
(c) a tendency to resort to destructive or disruptive behaviour to attract attention or to express anger or disappointment, e.g. knocking down a block pile, throwing toys or materials, destroying other children's creative efforts.

Item 20 Laughs at appropriate times

Descriptor: The child laughs or smiles to show amusement at appropriate situations or stories. He does not laugh at situations of cruelty or distress or in an effort to evade facing situations or at odd times without any apparent provocation.

Score minus if: you observe the child's emotional reactions to differ markedly from that of his peers in the same situation, or if his reactions are frequently opposite to what you may have expected.

Item 21 Can tolerate some frustration or setback

Descriptor: The child can accept difficulty or disappointment without becoming unduly upset.

Score minus if: any of the following are **recurrent** patterns of behaviour:

(a) the child bursts into tears when confronted by a difficult or unusual task;

(b) becomes exasperated and throws or breaks blocks or toys when the task becomes too difficult;

(c) becomes over-boisterous when unable to join in a group or a game and refuses to participate in quieter activities in a calm way;

(d) becomes angry and upset when unable to do a simple task such as removing a lid from a jar or box.

Item 22 Does not make undue emotional demands on the teacher

Descriptor: The child does not make excessive demands for affection, approval, sympathy, and encouragement from the teacher.

Score minus if: any of the following constitute **regular** behaviour patterns:

(a) constant requests for assurance and/or assistance in a task for which he has demonstrated competence;

(b) constant demands for sympathy and concern for real or imagined ailments and hurts;

(c) inability to tolerate the absence of the teacher for short periods either in the classroom or in the playground;

(d) constant and clinging demonstrations of affection – touching, clinging, kissing.

Motor Skills

Item 23 Does not trip over frequently

Descriptor: The child does not trip and stumble frequently in normal daily movement. He does not appear clumsy in normal activities.

Score minus if: the child trips over his own feet frequently in the classroom or playground or walks into obstacles.

Item 24 Does not bump into people or objects

Descriptor: In normal daily routines the child does not collide with other children or bump into furniture and other objects.

Score minus if: the child frequently appears to misjudge distances.

Note for Items 25–28

It is suggested that **Items 25–28** may be scored from observations made during simple games which can be played with groups of up to six children. Should it be necessary to observe children in larger groups, it is suggested that the games and activities take the form of 'Follow the leader' so that the teacher may observe each child individually.

These games distract the child from being over-conscious of the required skill and allow sufficient repetitions to make an accurate assessment of ability without boring him or making him anxious. Suggestions for such games are included. These are in no way mandatory and the teacher may think of similar, but more appropriate, activities for the particular group.

Item 25 Can walk three to four metres on toes without touching the floor with heels

Game: 'Let's all be giraffes. Walk tall, don't put your heels on the floor.'

Score minus if: the child overbalances or cannot remain on his toes for the given distance.

Item 26 Stands on each leg alternately

Game: 'Let's be seagulls. We'll jump along the sand and when I clap we'll stand quite still on **one** leg, just the way a seagull does.' Have several tries asking children to stand on 'the other leg' for alternative attempts.

Score minus if: the child cannot remain on one leg for about three seconds.

Item 27 Hops on one leg

Game: Using the rhyme – 'Christopher Robin goes hoppity, hoppity, hoppity, hoppity, hop' – allow each child to have a turn at being Christopher.

Score minus if: the child cannot make five consecutive hops on one leg without overbalancing.

Item 28 Will voluntarily walk on balance beam

Descriptor: It is suggested that the balance beam is approximately 10 cm from the floor or ground.

Game: 'Let's cross the creek. If you step off the beam you get your feet wet.' How many people in the group get wet feet?
N.B. Do not force a child. This item is scored **plus** only for a voluntary walk.

Score minus if: the child refuses to attempt the task, or if, after three tries, he still fails to walk the length of the beam without putting a foot to the ground.

Item 29 Has no difficulty in doing up buttons

Descriptor: The child has sufficient dexterity, skill, and ease in using his hands to be able to do up buttons on a coat or cardigan without assistance.

Score minus if: the child cannot manage to do up **any** buttons on his shirt or cardigan.

Item 30 Has little or no difficulty in controlling a writing implement

Descriptor: The child is able to hold a pencil or crayon in such a way as to be able to make confident attempts to draw or copy simple symbols.

Score minus if: the child
(a) persists in grasping the implement in a 'full fist' grasp even after being shown how to hold a crayon or pencil;
(b) is so inhibited when putting crayon to paper that he achieves only a few dots or a very shaky line;
(c) refuses to use crayons or pencils despite adequate encouragement.

Item 31 Can draw a reasonably straight line of about 10 cm in length

Descriptor: It is suggested that small groups of children may make or draw a fence or railway line, thus having the opportunity to make several attempts at the required item. This helps to relax the child and the resultant series of marks helps the teacher to assess consistency of control.

Score minus if: after five attempts the child fails to draw a reasonably straight line.

Item 32 Can draw a recognizable picture of a house and a man

Descriptor: Ask the children to draw a picture of a man, the very best man they can draw. It sometimes helps some children to suggest that they draw 'daddy' or father. Ask them to draw a house for the man to live in on the back of the sheet.

Score minus if: the child
(a) merely scribbles;
(b) makes a few desultory lines;
(c) cannot bring himself to attempt the task;

(d) makes a picture, the parts of which are totally unconnected, e.g. head, legs and arms but these are not connected to form a body.

Qualification: Children's drawings at this stage of development tend to be very primitive. Many drawings will lack bodies, hair, fingers, etc. However, the task requires only that the child have a concept of a person and of a building that they can represent on paper.

Item 33 Colours in a shape staying within the outline given

Descriptor: The teacher provides a sheet on which is drawn a circle 9 cm in diameter. The child is asked to colour in the circle with crayon or texta-colour without going outside the shape.

Score minus if: the child
(a) scribbles randomly over the surface of the shape with no regard to the boundaries;
(b) has great difficulty staying within the boundary and constantly transgresses it because of poor motor control;
(c) puts a blob of colour in the centre of the circle and fails to understand that he is required to cover the surface, in spite of adequate instruction.

Item 34 Can cut out a simple shape neatly

Descriptor: The teacher provides a sheet on which is drawn a triangle or square with edges about 9 cm long. The child uses small scissors to cut along a line reasonably accurately.

Score minus if: the child
(a) is unable to hold the scissors at all;
(b) cannot control them so as to cut the paper unaided;
(c) fails to follow the line and produce an approximation of the original shape.

Memory and Attention

Item 35 Counts to 10 without error

Descriptor: The child counts to 10 without assistance or prompting. This is a rote counting task which helps assess the child's exposure to number names and gives a rough estimate of memory sequencing.

Score minus if: the child makes an error in sequence and does not correct it himself.

Item 36 Can name from memory, **in any order,** four objects which have been exposed to him briefly

Descriptor: Four small familiar objects, e.g. small doll, matchbox car, block, flower, small plastic animals, etc., are exposed for approximately five seconds. They are then covered and the child is asked to name the objects from memory. Give no assistance.

Score minus if: the child leaves out one or more objects.

Item 37 Remembers and repeats four names (excluding his own) after hearing them from the teacher only once

Descriptor: The teacher says four first names (excluding the child's) and the child repeats them in any order without prompting.
If the child's first language is not English, where possible use names common in his own national group.

Score minus if: any name is left out.

Item 38 Repeats the names in **Item 37** in the order in which they are spoken by the teacher

Descriptor: The teacher says four first names (excluding the child's) and the child repeats them, without prompting, in the order in which they were spoken by the teacher.

If the child's first language is not English, where possible use names common in his own national group.

Score minus if: the child is unable to repeat the names in the sequence given.

Item 39 Can work by himself

Descriptor: The child normally carries out classroom tasks without constant encouragement and help from others, i.e. the child can complete a drawing, puzzle, etc., provided adequate directions have been given.

Score minus if: the child
(a) habitually stops work as soon as the teacher's attention is distracted from him;
(b) constantly demands approval for every step from teacher and/or peers;
(c) becomes bored and restless unless constantly encouraged to continue a task;
(d) makes a desultory attempt at a given task and then resorts to aimless play.

Item 40 Pays adequate attention

Descriptor: The child appears reasonably alert to, and observant of, activities going on around him and responds to instructions and comments from the teacher. He can listen to stories and rhymes and can follow a discussion in a small group.

Score minus if: the child
(a) almost always has to be called to attention after the rest of the group is attending;
(b) generally wanders away, plays and distracts others, or appears to day-dream during story-telling;
(c) always has to be given extra instruction when the rest of the group has understood what is required;
(d) appears not to listen but rather follows other children in a random fashion as if attempting to conform with some required behaviour.

Item 41 Follows directions efficiently

Descriptor: The child is able to carry out simple directions without indecision and/or error, e.g. collect materials and commence a simple task; locate materials in the classroom, such as a book from a cupboard.

Score minus if: the child
(a) does not understand, possibly because of lack of English;
(b) constantly appears to miss or mis-hear directions;
(c) can cope with only a small portion of an instruction;
(d) attempts to carry out directions but becomes confused early in the task.

Item 42 Does not lose interest quickly

Descriptor: The child is able to remain attentive to, or involved in, an activity until it is finished or until he is asked to stop.

Score minus if: the child
(a) hurries from one activity to another without completing anything or gaining any apparent satisfaction from it;
(b) loses interest after a few minutes and wanders away from an activity or a group without any real participation.

Item 43 Can occupy himself constructively when he finishes an assigned task

Descriptor: The child shows initiative in finding further occupation when he finishes a task ahead of the other children, e.g. begins a second painting, gets another puzzle, looks at a book, or goes to the construction corner.

Score minus if: the child
(a) invariably approaches the teacher at the conclusion of each task;
(b) cannot continue with a purposive activity without direct instruction;
(c) sits and daydreams **every** time a task is finished and shows no initiative in attempting another activity.

Language Skills

Item 44 Communicates his needs

Descriptor: The child makes his needs known to the teacher, is not afraid to seek help when in difficulty and feels free to ask for materials. He can talk with the teacher on a simple level about his difficulties, likes, and dislikes.

Score minus if: the child
(a) **never** initiates communication;
(b) appears to be afraid to ask questions or to ask for materials;
(c) if in difficulty, tends to withdraw from an activity rather than seek help;
(d) speaks inaudibly;
(e) wets or soils frequently without asking to go to the toilet.

Item 45 Does not rely on gestures or other non-verbal means to make himself understood

Descriptor: The child communicates with the teacher and other children by means of speech, although this may be supported by some gestures, e.g. pointing and nodding.

He can ask for a book while pointing to the one he wants.

Score minus if: (a) almost all response to attempted communication is by nodding, pointing, etc.;
(b) all questions are answered by nodding or headshaking;
(c) the child usually points to an object or in a direction when 'asking' for something and fails to name the object or requirement.

Item 46 Expresses himself adequately in English

Descriptor: The child has sufficient competence in spoken English to make himself understood by the teacher and the other children. It is not necessary that the responses be in acceptable sentences, correct grammar, etc.

Score minus if: the child
(a) appears unable to speak with the teacher or other children even though he converses freely with a member of his own family or a person of his own nationality in his own language;
(b) makes almost all his approaches to the teacher in a language other than English;
(c) finds it very difficult to make himself understood because of limited English vocabulary and constructions;
(d) does not communicate sufficiently in English to make his needs known.

Item 47 Is able to name relevant objects in the classroom

Descriptor: This item can be administered as part of a 'naming game' with a group of five or six children. Common objects in the classroom such as chair, table, book, crayon, book-shelf, cupboard, etc. are named by the child. Each child should be required to name six to eight such items.

Score minus if: the child
(a) has insufficient English to name the required objects;
(b) does not respond because of extreme shyness;
(c) appears very confused and unable to name objects correctly.

Item 48 Does not use baby talk

Descriptor: The child usually uses the proper names for objects, e.g. train vs. choo-choo, horse vs. gee-gee; has some mastery of pronouns, using them appropriately in most instances, and some mastery of verbs, e.g. went vs. goed; ran vs. runned.

Score minus if: the child's speech
(a) is dominated by infantile mispronunciations and 'cute' words;

(b) is so individual in the use of structures such as verbs, pronouns, etc. that speech is largely unintelligible.

Item 49 Speech is clear

Descriptor: Pronunciation is clear enough to be understood. It is loud enough and slow enough to be understood by teacher and children.

Score minus if: (a) infantile mispronunciation (infantile dyslalia) makes speech unintelligible;

(b) an infantile lisp makes it difficult to understand the child, e.g. mispronunciations of r, s, f, th, l;

(c) speech is mumbled so softly as to be incomprehensible;

(d) speech is so fast that there is a gabbling effect which makes it difficult to understand what is being said.

Item 50 Does not stutter

Descriptor: The child's everyday communication is not impeded by a noticeable stutter.

Score minus if: a stutter is present almost every time the child speaks to the teacher.

Qualification: Where there is incidence of stuttering which prevents normal communication, the child should be referred to a speech pathologist. On no account should the child be made to feel self-conscious or different because of such a speech defect, nor should he be forced to repeat communications in the hope of eliminating the stutter.

Item 51 Speaks in complete sentences most of the time

Descriptor: The child generally uses comprehensible sentences and phrases and does not rely on grunts, monosyllabic responses, or gestures when the teacher and children try to communicate with him.

Score minus if: most of the child's communication in the classroom is in single words or by way of gesture.

Item 52 Spontaneously communicates information from home to school

Descriptor: The child spontaneously talks about home experiences with the teacher and/or classmates when the opportunity arises in the classroom, e.g. at morning chat or incidentally during other discussions when comment is relevant.

Score minus if: the child
(a) never mentions home even though mention would be natural and relevant;

(b) avoids answering questions about what happens at home;

(c) seems anxious or distressed when home is mentioned but does not offer any information.

Item 53 Attempts to explain things to the teacher or to another child

Descriptor: The child will attempt a simple explanation for the teacher or children about what he is trying to do, or what happened in the classroom or playground, such as an accident, or why something occurred, like being late for school.

Score minus if: the child
(a) usually cannot give a simple description of what happened in case of a minor upset or accident;
(b) appears distressed about something on several occasions but cannot explain why;
(c) often needs help or direction but cannot express his needs in words.

Item 54 Can relate something he has seen or experienced

Descriptor: The child can give a brief but accurate and clear description of an experience such as a class excursion, his birthday party, going to the beach, etc.

Score minus if: the child
(a) never voluntarily comments on class experiences;
(b) can answer only in monosyllables when encouraged and questioned;
(c) usually becomes distressed or withdrawn when asked to comment on some familiar experience.

Item 55 Likes to listen to stories

Descriptor: The child can sit still and become absorbed in a short story, suitable to his age and interest level, and show the appropriate emotional response.

Score minus if: the child
(a) repeatedly becomes restive and/or disruptive during story time;
(b) usually loses interest and wanders away from the group;
(c) appears completely withdrawn from, and unresponsive to, all types of story-telling.

Item 56 Answers simple questions on story content

Descriptor: When asked, the child can answer simple questions identifying the main characters and events in a story he has just heard.

Score minus if: the child
(a) has obviously not understood or has misunderstood the content of the story for whatever reason;
(b) has insufficient language skills to answer questions.

Item 57 Participates in class discussion

Descriptor: The child answers questions, offers comments, and makes observations in a class discussion.

Score minus if: the child tends not to take an active part in class discussion even when adequately encouraged.

Note for Items 58–62

The following language items can usually be tested during language games. It is important that teachers check on **natural** response on two or three occasions. A simple chart, with the appropriate responses indicated across the top and children's names listed vertically, allows an accurate record to be kept for each child.

Item 58 Can pronounce consonantal blends correctly in words such as keTTLE FLag piCTure neST TRee STamp BRother

Descriptor: The child can name the above from pictures or objects. The teacher makes a note of each blend for each child. This may be done in small groups of about five children with simple games such as 'I spy', 'Tick-tack-toe', etc., or by individual testing of each child.

Score minus if: on three attempts (not necessarily consecutive) the child mispronounces five or more blends.

Item 59 Is able to understand and use prepositions such as to, from, under, above, on, in

Descriptor: The child should be able to describe position using the above prepositions, e.g. 'The doll is **on** the table' and carry out instructions involving their use, e.g. 'Put the book **under** the box'. Puppets can be successfully used in games which test this usage.

Score minus if: the child cannot provide both a correct description and a correct action for at least five of the prepositions listed above.

Item 60 Understands and can use the word **not** (e.g. This is white, this is **not** white)

Descriptor: This may be tested by preparing a card game using a number of cards with simple representational objects on each, e.g.
(1) four cats and a dog. Point to the one that is **not** a cat.
(2) three black balls and one red. Show me the one that is **not** black.
(3) three boys and one girl. Point to the one that is **not** a boy.
(4) three apples and a pear. Point to the pear and say, 'Is this an apple? Tell me in a sentence'.
(5) a motor car and a bicycle. Point to the bicycle. 'Is this a car? Tell me in a sentence.'

Score minus if: the child fails to manage the **not** concept on more than **two** of the five responses.

Item 61 Can understand and correctly use comparative words: small, smaller; large, larger; high, higher

Descriptor: This item is perhaps best treated by sentence completion. Have cards with clear illustrations for each comparison or use appropriate comparable objects e.g. a **small** dog and a **smaller** dog. Give the appropriate description, e.g.
'This dog is small but this one is _____'
'This horse is large but this one is _____'

Score minus if: the child fails to respond correctly on more than **one** of the three comparisons.

Item 62 Understands and is not confused by the fact that a single word can have different meanings:

orange – fruit	orange – colour
sheet – paper	sheet – on bed
fly – insect	fly – activity
chop – meat	chop – activity
glasses – spectacles	glasses – to drink from

Descriptor: Two sets of cards may be prepared with pictures of above. The teacher shows one card, the child names it then finds a card from the pile that has a similar name but a different meaning.

Score minus if: the child makes three or more errors.

Table 1

Percentage of Children Obtaining Plus
in 1974 and 1975 Samples

ITEM	1974 (N = 1846)	1975 (N = 1677)
Social Development	%	%
1 Tells full name on request	81	85
2 Tells full address on request	41	40
3 Is rarely late for school	93	93
4 Has been absent for no more than 3 days in the past month	85	87
5 Is responsible for own belongings	86	86
6 Is not disruptive in class	85	86
7 Shows an attitude of enquiry	75	84
8 Is accepted by other children	96	97
9 Is reasonably patient in awaiting his turn for help from the teacher	88	89
10 Joins readily in play and at class activities	88	90
Emotional Development		
11 Appears happy most of the time	94	96
12 Shares belongings with others	88	89
13 Shows concern for the distress of others	88	91
14 Does not cry frequently	92	94
15 Not over-active	90	92
16 Not easily distracted from what he is doing	73	75
17 Accepts changes in activity or routine without undue stress	90	95
18 Not unduly shy	86	87
19 Not over-aggressive	92	94
20 Laughs at appropriate times	90	93
21 Can tolerate some frustration or setback	88	92
22 Does not make undue emotional demands on the teacher	90	93
Motor Skills		
23 Does not trip over frequently	94	94
24 Does not bump into people or objects	92	94
25 Can walk 3–4 metres on toes without touching the floor with heels	95	96
26 Stands on each leg alternately	92	94
27 Hops on one leg	92	93
28 Will voluntarily walk on balance beam	94	95
29 Has no difficulty doing up buttons	88	90
30 Has little or no difficulty controlling a writing implement	90	90
31 Can draw a reasonably straight line of about 10 cm in length	94	94
32 Can draw a recognizable picture of a house and a man	86	87
33 Colours in a shape staying within the outline given	82	80
34 Can cut out a simple shape neatly	71	76
Memory and Attention		
35 Counts to 10 without error	81	83
36 Can name from memory in any order 4 objects which have been exposed to him briefly	49	48
37 Remembers and repeats 4 names (excluding his own) after hearing them from the teacher only once	53	51
38 Repeats the names in **Item 37** in the order in which they were spoken by the teacher	44	41
39 Can work by himself	86	87
40 Pays adequate attention	78	79
41 Follows directions efficiently	78	77
42 Does not lose interest quickly	74	77
43 Can occupy himself constructively when he finishes an assigned task	78	81
Language Skills		
44 Communicates his needs	92	93
45 Does not rely on gestures or other non-verbal means only to make himself understood	91	93
46 Expresses himself adequately in English	84	83
47 Is able to name relevant objects in the classroom	90	89
48 Does not use baby talk	90	92
49 Speech is clear	83	85
50 Does not stutter	95	97
51 Speaks in complete sentences most of the time	74	76
52 Spontaneously communicates information from home to school	69	73
53 Attempts to explain things to the teacher or to another child	80	84
54 Can relate something he has seen or experienced	82	88
55 Likes to listen to stories	93	96
56 Answers simple questions on story content	80	82
57 Participates in class discussion	66	72
58 Can pronounce consonantal blends correctly in words such as kettle, flag, picture, nest, tree, stamp, brother	73	84
59 Is able to understand and use prepositions correctly (e.g. to, from, under, above, on, in)	64	73
60 Understands and can use the word **not** (e.g. This is white; This is **not** white)	33	57
61 Can understand and correctly use comparative words	44	64
62 Understands and is not confused by the fact that single words can have different meanings	51	56

Research Findings

The Checklists were used on an experimental basis over two years.

The Samples

The samples consisted of 964 boys and 882 girls during 1974, and 873 boys and 804 girls during 1975. In both years the samples were drawn from three Melbourne localities, a middle to upper-middle class area, a low socio-economic western suburb, and an inner suburban area which contained many depressed sections. Government and Catholic schools were included in the samples. Missing data resulted from the absence of certain children on testing days and from other administrative problems. Of the 1846 children in the 1974 sample, data on total Checklist performance were available for 1833 children, i.e. 964 boys and 869 girls.

In the 1975 sample the profiles were complete for 1638 children, consisting of 855 boys and 783 girls.

The Checklists were administered by the children's class teachers.

Results

Checklist results for 1974 and 1975 were very similar indeed. Table 1 shows the percentages of children scoring **plus** on each item for both studies.

It should be noted that only for **Items 58-61** did the differences in percentages between the two years exceed 10 per cent. The occurrence of these differences is unusual and may be related to the fact that, due to Education Department policy, the Checklists were administered to the 1975 sample during August, while in 1974 the sample was tested during March and April.

The frequency distributions obtained in 1974 for each sub-section and for the total Checklist and for groups of different ages were compared with those obtained during 1975. In addition, the performance of the total samples for 1974 and 1975 was also compared. Table 2 shows the results of the Kolmogorov-Smirnov tests of significance between the corresponding cumulative frequency distributions.

Although rarely statistically significant, the results of the 1975 sample tended to be somewhat higher than those of the 1974 sample and, for all significant differences recorded in Table 2, performance in 1975 exceeded that in 1974. These findings may again be explained by the fact that the children in the 1975 sample tended to be older and had been exposed to a larger amount of school experience prior to the administration of the Checklist than had children in the 1974 sample.

The evidence in Table 2 indicated that the most significant differences in performance occurred between the relatively small groups aged in excess of 5 years 10 months (> 70 months).

Table 2

Results of KOLMOGOROV-SMIRNOV Tests of Significance between the Cumulative Frequencies of the 1974 and 1975 Samples

Age in Months	Social Development	Emotional Development	Motor Skills	Memory Attention	Language Skills	N 1974	N 1975
< 61	NS	NS	NS	NS	NS	591	457
61-62	NS	NS	NS	NS	NS	287	266
63-64	NS	NS	NS	NS	NS	276	266
65-66	NS	NS	NS	NS	NS	341	280
67-68	NS	NS	NS	NS	NS	270	242
69-70	NS	NS	p<.001	NS	NS	45	84
> 70	p<.001	p<.001	p<.001	p<.001	p<.001	36	82
Total Sample	NS	NS	NS	NS	p<.001	1846	1677
Number of Items	10	12	12	9	19		

Table 3
Means and Standard Deviations of Checklist Results According to Age

Scale	Age in Months	1974		1975	
		Mean	SD	Mean	SD
Total List	<61	47.6	10.7	49.9	9.6
	61-62	49.8	9.6	51.4	9.5
	63-64	51.0	8.9	51.4	8.9
	65-66	52.9	8.2	53.2	8.2
	67-68	51.1	10.1	53.4	8.7
	69-70	45.5	12.0	54.0	7.2
	>70	26.2	22.8	47.8	10.3
Social Development	<61	7.8	1.9	8.1	1.6
	61-62	8.1	1.6	8.4	1.5
	63-64	8.4	1.6	8.4	1.5
	65-66	8.6	1.5	8.5	1.5
	67-68	8.3	1.7	8.6	1.5
	69-70	7.6	1.8	8.5	1.4
	>70	4.6	3.8	7.8	1.7
Emotional Development	<61	10.3	2.1	10.7	1.7
	61-62	10.7	1.8	10.9	1.7
	63-64	10.8	1.8	10.9	1.6
	65-66	11.0	1.7	11.6	1.5
	67-68	10.6	2.1	11.0	1.6
	69-70	10.0	2.4	11.2	1.3
	>70	5.7	4.9	10.3	2.4
Motor Skills	<61	10.2	2.2	10.4	2.1
	61-62	10.7	1.8	10.6	2.1
	63-64	10.9	1.8	10.7	1.9
	65-66	11.2	1.5	11.1	1.5
	67-68	10.8	1.9	11.1	1.6
	69-70	9.2	3.1	11.4	1.1
	>70	5.9	5.0	10.3	2.1
Memory and Attention	<61	5.7	2.6	5.8	2.6
	61-62	6.2	2.3	6.3	2.5
	63-64	6.4	2.4	6.3	2.4
	65-66	6.8	2.2	6.6	2.1
	67-68	6.4	2.4	6.7	2.2
	69-70	5.4	2.6	6.7	2.0
	>70	2.7	3.1	5.4	2.5
Language Skills	<61	13.6	4.4	14.8	4.3
	61-62	14.0	4.4	15.3	4.2
	63-64	14.6	4.0	15.2	4.3
	65-66	15.1	3.7	15.8	3.7
	67-68	15.0	4.3	16.1	4.0
	69-70	13.3	5.1	15.9	3.6
	>70	7.3	7.3	13.9	5.0

Inspection of Table 3, in which means and standard deviations of the scores for age groups in two-month bands are presented, shows little systematic patterning of results according to age. Amount of school experience could have been a more relevant variable.

The significant differences recorded in Table 2, and the generally lower results for the oldest children in the samples recorded in Table 3, would appear to indicate that children who started school very much later than their peers, or children who repeated their first year of schooling, were more likely to have special problems. Such problems or lag in general development might have resulted in the children's delayed entrance into school or in their repeating the beginners' grade. The considerably larger standard deviations recorded in Table 3, particularly in the groups of children who were older than 70 months, would seem to suggest a much greater diversity of performance in relation to the Checklist than was observed in the other age groups. The fact that the numbers of children in the top two age groups were considerably smaller than the numbers of children in the other age groups (see Table 2) should also be noted.

The means and standard deviations for the performances of boys and girls on the total Checklist and for each of the sub-sections are recorded in Table 4. The differences in performance between boys and girls are highly significant statistically, with boys consistently scoring lower than girls.

Table 4
Comparison of Mean Scores and Standard Deviations for Boys and Girls in the 1974 and 1975 Samples

Scale	Sex	1974			1975		
		Mean	SD	P	Mean	SD	P
Total List	M	48.3	10.6	<0.001	50.2	9.6	<0.001
	F	51.6	9.2		53.1	8.4	
Social Development	M	7.9	1.8	<0.001	8.2	1.6	<0.001
	F	8.4	1.6		8.5	1.4	
Emotional Development	M	10.3	2.1	<0.001	10.7	1.8	<0.001
	F	10.9	1.8		11.1	1.5	
Motor Skills	M	10.4	2.2	<0.001	10.4	2.1	<0.001
	F	11.0	1.7		11.1	1.6	
Memory and Attention	M	5.8	2.6	<0.001	5.8	2.6	<0.001
	F	6.6	2.3		6.7	2.2	
Language Skills	M	13.7	4.4	<0.001	15.0	4.3	<0.01
	F	14.7	4.1		15.6	4.0	

The statistically significant sex differences resulted from the overall performances of the two groups and not from specific items or sections. In general, the results of the boys tended to be somewhat lower, but performance on individual items did not differ significantly.

The differences presented here serve to remind us of these frequently encountered developmental differences. It is suggested, however, that although statistically significant, these differences were not of sufficient size to affect curriculum planning, since differences in performance within each sex were much larger than those between the sexes.

The Reliability and Stability of the Checklist

The conventional methods for the estimation of reliability such as test-retest, split-half and the Kuder-Richardson formulae assume that the scores on the total set of items or on each half of the items provide a meaningful measure of the competence of the individual in the area measured. It is quite clear that the Checklist score determined by the number of **plus** or **minus** responses did not necessarily reflect the intensity of possible strengths and weaknesses in the various behaviour areas.

The KR-20 values reported in Table 5 have been presented since they reveal a moderate degree of internal consistency in the total Checklist and its subsections.

Table 5
KR-20 Reliability Coefficients*

Age in Months	Social Development		Emotional Development		Motor Skills		Memory and Attention		Language Skills		Total	
	1974	1975	1974	1975	1974	1975	1974	1975	1974	1975	1974	1975
<60	63	54	73	67	75	76	82	80	88	88	76	73
60	71	61	80	74	79	77	82	83	89	90	80	77
61	59	63	76	74	69	85	79	85	88	90	74	79
62	48	50	63	67	78	78	78	81	90	89	71	73
63	56	54	72	69	75	72	81	80	89	91	75	73
64	60	51	73	73	77	81	80	81	85	89	75	75
65	65	61	82	69	75	75	77	77	88	88	77	74
66	57	62	66	75	79	77	79	79	84	86	73	76
67	63	59	80	64	78	69	82	75	89	91	73	72
68	66	64	81	79	79	75	80	81	90	90	79	78
69	37	52	74	66	81	59	75	72	90	84	71	67
70	78	69	89	59	94	76	91	85	95	92	89	76
>70	68	57	80	85	83	80	84	78	93	91	82	78
Average	61	58	76	71	79	75	81	80	89	89	77	75
Number of Items	10		12		12		9		19		62	

* KR-20 Reliability Coefficients have been recorded with decimal points omitted.

It was considered that the nature of the instrument made it more important to investigate the stability of the Checklist with different groups of individuals who were drawn from the same target population. Consequently the similarity of the KR-20 values for 1974 and 1975 as recorded in Table 5 is of some consequence.

The rank order of item facility for the 1974 sample was compared with that for the 1975 sample. The following Spearman Rank Correlation Coefficients were obtained with the number of items in each section record in parentheses:

Social Development (10)	0.82
Emotional Development (12)	0.92
Motor Skills (12)	0.96
Memory and Attention (9)	0.97
Language Skills (19)	0.96
Total Checklist (62)	0.96

These findings suggest that the relative difficulty of the items, both within the sub-sections of the Checklist and for the total set of items did not differ significantly between the administration in 1974 and that in 1975.

To sum up, the evidence from studies comparing performance for 1974 with that for 1975 leads to the conclusion that, while the Checklist is a relatively unstructured observational tool and may therefore be expected to reflect considerable subjectivity as a measurement device, the data obtained from its use show a high degree of stability over the two years. Consequently, it is suggested that the Checklist would provide a sound basis for general planning in accordance with the specific needs of individual children.

The Validity of the Checklist

Correlation with Teacher Assessment

In a study comparing different methods of assessing the development of children at kindergarten, Lang (1974) compared results on the *Checklists for School Beginners* with teacher assessments in a sample from a number of kindergartens in the Melbourne metropolitan area. The assessment reports of teachers preceded the administration of the Checklists in all cases. Teachers were unaware of the content and design of the Checklists at the time of their original assessment. A content analysis of the teachers' reports on each child was carried out and statements of the child's development and areas considered by teachers were compared with the results obtained on the *Checklist for Teachers*. The overall correlations between teacher assessment and the *Checklist for Teachers* was 0.8.

The above study was performed on a small sample only. However, it provided some additional information on the validity of assessments made by means of the Checklist, and has suggested an area in which a further, more extensive research study would be of value.

The Construct Validity of the Checklist

It was possible that the Checklist would measure different attributes or processes when applied to different groups of children. Developmental work on an instrument for use with the general population of school beginners had to include research which would provide some assurance that the instrument measured the same constructs for different sub-groups within the population of school beginners.

To discount the possibility that the *Checklist for Teachers* measured different constructs, the Checklist was investigated using factor analytic techniques. Factor analyses were carried out on the 1974 and the 1975 data to examine the internal structure of the *Checklist for Teachers* and its sub-sections.

The computer program FACTAN from OSIRIS III (University of Michigan, 1974) was used. Because this program is limited to 60 variables, two items were excluded from the factor analysis. The excluded items were:

Item 52 'Spontaneously communicates information from home to school'

Item 55 'Likes to listen to stories'

The decision to exclude these particular items was largely arbitrary. Both items came from the Language Skills sub-section of the Checklist.

In the factor analyses, five factors were selected by the 'scree test' (Cattell, 1966) and submitted to a varimax rotation. Only factor loadings of 0.3 and greater have been recorded in Table 6 (page 23).

Table 6

Loadings of Items[1] on Five Factors Extracted from 1974 and 1975 Data Respectively

Items	1974 Factor Loadings[2]					1975 Factor Loadings[2]				
	I	II	III	IV	V	I	II	III	V	IV
Social Development										
1 Tells full name on request	40		31			57				
2 Tells full address on request	38					35				
3 Is rarely late for school										
4 Less than three days absence in past month		−31								
5 Is responsible for own belongings				−46						−48
6 Is not disruptive in class		−41		−58		30	−66			−31
7 Shows an attitude of enquiry			52					50		−34
8 Is accepted by other children			30					37		
9 Reasonably patient awaiting turn				−58			−66			
10 Joins readily in class activities		−30	49					66		
Emotional Development										
11 Appears happy most of the time			48					68		
12 Shares belongings with others				−43			−55			
13 Concern for the distress of others			49	−31			−31	39		
14 Does not cry frequently		−53				30		39		
15 Not overactive		−53		−45			−66			
16 Not easily distracted				−69			−41			−63
17 Accepts change without undue stress		−38						33		
18 Not unduly shy			47					62		
19 Not over-aggressive		−55		−37			−59			
20 Laughs at appropriate times			51					47		
21 Tolerates some frustration		−36		−31			−39	38		
22 No undue emotional demands		−60		−35			−55			
Motor Skills										
23 Does not trip over frequently		−63							51	
24 Does not bump into people/objects		−60							48	
25 Tip-toes 3–4 metres					50				50	
26 Stands on each leg alternately					64				48	
27 Hops on one leg					67				51	
28 Voluntarily walk on balance beam					55				53	
29 No difficulty in doing up buttons					39				43	
30 Little/no difficulty with writing implement					36				54	−44
31 Draws reasonably straight line of 10 cm					35				48	
32 Draws recognizable picture of house/man				−40	31	37			43	−34
33 Colours shape within outline given				−44					44	−43
34 Can cut out a shape neatly				−40	30				36	
Memory and Attention										
35 Counts to 10 without error	40			−31		49				
36 Names 4 objects from memory in any order	35					38				
37 Repeats 4 given names	52					48				
38 Repeats Item 37 in order given	51					46				
39 Can work by himself				−56						−59
40 Pays adequate attention				−70			−38			−66
41 Follows directions efficiently	34			−56		43				−68
42 Does not lose interest quickly				−70			−35			−68
43 Can occupy himself constructively				−61						−64
Language Skills										
44 Communicate his needs			55			39		43		
45 Does not rely on gestures etc.	31	−39	43			53				
46 Speaks adequate English	52		49			77				
47 Names relevant objects in classroom	49		42			70				
48 Does not use baby talk		−46							47	
49 Speech is clear	38								34	
50 Does not stutter		−57							30	
51 Speaks in complete sentences	56		43			73				
52 Not included in variable list										
53 Adequate at explanation	34		59					47		
54 Can relate experiences	47		61			65				
55 Not included in variable list										
56 Answers simple questions on story	50		56			67				
57 Participates in class discussion	43		57			57		42		
58 Pronounces consonant blends correctly	41								36	
59 Understands/uses prepositions correctly	61					66				
60 Understands/uses 'not' correctly	55					55				
61 Understands/uses comparative words	63					61				
62 Knows a word can have different meanings	52					52				
	λ 12.35	4.17	2.52	1.95	1.86	11.72	4.39	2.57	2.36	1.71
	h^2 20.59	6.94	4.20	3.25	3.11	19.54	7.31	4.28	3.94	2.85

[1] The items, as presented in the above table, indicate the content of the Checklist items, but were contracted to conserve space. To ensure accurate observation of children, it is essential to administer the items as given on the Checklist protocol form.

[2] Factor loadings recorded with decimal points omitted.

Comparison of the Factors obtained from the 1974 and 1975 Analyses

Inspection of Table 6 suggests that the results of the 1974 and the 1975 studies were very similar indeed.

To examine statistically the extent to which constructs measured by the *Checklist for Teachers* in the 1974 sample correspond to those measured in the 1975 sample, a procedure to relate factors proposed by Ahmavaara (1954*a*, 1954*b*, 1957) and discussed in detail by Rummel (1970) was used.* This method yields a measure of relationship between all factors of the two principal components analyses simultaneously. The obtained measure of relationship may be interpreted as a correlation-coefficient. The computer program used was FCOMP OSIRIS III (University of Michigan, 1974).

The correspondence of the constructs measured by the Checklist in the two studies was high with a mean of 0.92. This result indicates that the *Checklist for Teachers* measured substantially the same constructs for different groups of school beginners. It should be noted that this result was obtained even though the children in the 1975 sample had been at school for six months when the Checklist was administered, and were, in general, older than those in the 1974 sample to whom the Checklist was administered six weeks after they started school. Thus, in spite of the differences in age and school experience of the two groups of school beginners, the correspondence between the factors was very high.

Interpretation of Factors

The following interpretation of the factors extracted uses the 1974 results. The decision to use the 1974 data for the detailed interpretation was based on the fact that this sample was larger than the 1975 sample, and that future use of the Checklist is likely to be under conditions which are more similar to those prevailing during the 1974 study than during 1975. Because of the degree of similarity of the results in the 1974 and 1975 studies, the choice of either set of results would have been meaningful.

Factor I

Of the 21 items loading significantly on this factor, 14 came from the Language Skills (LS) sub-section. Five items related to Memory and Attention (MA) and two items originated from the Social Development (SD) section of the Checklist.

Thus the majority of the items with significant loadings exclusive to Factor I originated from the Language Skills section of the Checklist. The other items exclusive to Factor I which came from the MA and SD sections, had a strong language prerequisite.

The non-exclusive items, items loading significantly on more than one factor, also tended to assess Language Skills. The non-exclusive items originating from the Memory and Attention and Social Development sections require considerable expressive or receptive language skills (e.g. **Item 41**).

Factor I is thus interpreted as a language competency factor. It describes the need for adequate understanding and usage of English on the part of the school beginner.

In contrast to Factor III, Factor I loads on items assessing the instrumental use of language. Factor III relates to language in terms of social interaction.

Factor II

Fourteen items were found to load significantly on Factor II. Six of these were related to Emotional Development (ED), two to Motor Skills (MS), three to Language Skills (LS) and three to Social Development (SD).

The majority of non-exclusive items loading significantly on Factor II came from the Emotional Development sub-section.

Factor II reflects emotional maturity in terms of the child's personal adequacy and his or her coping with the demands of the teacher and with social pressures, the high loadings of **Items 23** and **24** 'Does not trip over frequently' and 'Does not bump into people or objects' demonstrate the important link between certain aspects of physical development and emotional and social adequacy of the school beginner.

Factor III

Seventeen items loaded significantly on this factor. Nine of the significant items assessed Language Skills (LS), four related to Social Development (SD) and four to Emotional Development (ED).

The majority of the non-exclusive items related to Language Skills. In contrast to the Language Skills described by Factor I, Language Skills items loading significantly on Factor III had a strong relevance to success in situations requiring social interaction. It was thus not surprising to find that other items loading significantly on Factor III originated from the Social Development section of the Checklist. The significant items from the Emotional Development section, tended to assess behaviours which could be regarded as either prerequisites or at least facilitating social interaction.

Factor III may thus be labelled a Social Development factor. It describes behaviours related to communication with others and certain prerequisites for successful social interaction, such as language competency, social and emotional assurance, and being accepted by others.

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* This procedure which Ahmavaara calls 'transformation analysis' involves the rotation of one factor structure to a position of best fit of the test vectors of the two factor structures which are being compared. The cosines of the test vectors indicate the degree of correspondence and may be interpreted as correlation coefficients. The mean of these cosines indicates the degree to which the instrument measures the same set of constructs for the two groups.

Factor IV

Nineteen items showed significant loadings on Factor IV, six from the Memory and Attention (MA) section, seven from Emotional Development (ED), three from Social Development (SD) and three from Motor Skills (MS).

The majority of these items related to concentration, memory and attention. A considerable number of the items were from the Memory and Attention section of the Checklist. Items drawn from other sections of the Checklist contained strong components of memory and/or concentration skills. For example, concentration and attention are required in a child who is not easily distracted, is patient, draws or colours in a shape neatly. Memory and attention are also essential requirements for those items which involve following of directions and counting to 10. One might interpret disruptive, aggressive, or overactive behaviours and inability to tolerate some frustration in the classroom, as relating to an inability to concentrate on a task, to an inability to be attentive or to difficulty in remembering what is required in a particular situation.

Factor IV reflected the child's ability to function within the constraints of the classroom. The items tend to assess concentration, memory and attention, all of which would be required if the child were to survive in the school without too much frustration and if he were to co-operate with others in the classroom.

Factor V

Factor V showed significant loadings from nine items, all of which originated from the Motor Skills (MS) section of the Checklist.

Factor V was a Motor Skills factor. It is interesting to note that the items with the highest loadings on this factor reflected gross motor movements and physical balance. Items reflecting fine motor movements and co-ordination tended to have lower and less exclusive, yet significant loadings on this factor.

As mentioned previously, the grouping of the *Checklist for Teachers* into the five areas of Social Development, Emotional Development, Motor Skills, Memory and Attention and Language Skills was largely a matter of convenience. Decisions of where to place items were based mainly on face validity. The finding that the five factors extracted by factor analysis correspond consistently with the five original Checklist sections was noteworthy and pleasing, though not completely unexpected.

Appendix

The Checklist for Parents

Use of the *Checklist for Parents* is optional. It is available able in a number of different languages, i.e. Arabic, Greek, Italian, Maltese, Serbo-Croatian. Spanish and Turkish, as well as in English.

Most parents are eager to help their child settle into school. Many parents find it difficult however to make the initial approach to the teacher to find out how they might contribute.

The *Checklist for Parents* may serve as a useful device to establish initial contact with a parent. The Checklist profile can be discussed with parents and quite specific advice relating to areas of special need can be given. For a reduced scale version of the *Checklist for Parents* see overleaf.

References

AHMAVAARA, Y. (1954*a*). 'The Mathematical Theory of Factorial Invariance Under Selection'. *Psychometrika.* **19**, 27–38.

—— (1954*b*). 'Transformation Analysis of Factorial Data'. *Annales Academiae Scientiarum Fennicae.* **88**, 1–150.

—— (1957). 'On the Unified Factor Theory of Mind'. *Annales Academiae Scientiarium Fennicae.***106**, 1–176.

CATTELL, R. B. (1966). *Handbook of Multivariate Experimental Psychology.* (Rand McNally: Chicago.)

CRONBACH, L. J. (1970). *Essentials of Psychological Testing.* 3rd Edition. (Harper and Row: New York.)

GUILFORD, J. P. (1954). *Psychometric Methods.* 2nd Edition. (McGraw I. ll: New York.)

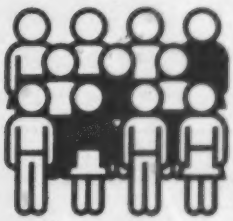
LANG, MARION. (1974) 'Comparative Assessment of Preschool Children'. Unpublished Paper. (Institute of Early Childhood Development: State College of Victoria, Melbourne.)

MESSICK, S. (1974). 'The Standard Problem: Meaning and Values in Measurement and Evaluation'. Presidential address to Division of Measurement and Evaluation. Meeting of the American Psychological Association, New Orleans.

RUMMEL, R. J. (1970). *Applied Factor Analysis* (Northwestern University Press: Evanston.)

UNIVERSITY OF MICHIGAN, Survey Research Centre ISR. (1974). *OSIRIS III: An Interpreted Collection of Computer Programs for the Management and Analysis of Social Science Data.* (Survey Research Center, ISR: Michigan.)

PARENT



ACER Checklists for school beginners

Child's Name: _____

Boy or Girl: _____

Date of Birth: _____

School: _____

Teacher's Name: _____

Language spoken at home: _____

Today's Date: _____

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The ACER Checklists for School Beginners comprises Checklist for Parents, Checklist for Teachers, Class Record Sheet and Manual.

To help the teacher know and understand **your child** more quickly and to help him or her settle more happily at school, please complete the following list of statements.

Each school beginner has a special pattern of likes and dislikes, abilities and experiences. If the teacher can know these more quickly and easily, a program can be prepared to allow for the differences between children.

Read each statement carefully and place a tick (✓) under **Yes** or **No** as it applies to your child.

	Yes	No
1 Knows full name		
2 Can tell the name of the street where he lives		
3 Can recognize his own name in print		
4 Understands the dangers of traffic, electricity, fire, water, and ...gh places		
5 Can recognize his own belongings		
6 Talks in sentences		
7 Can make people outside the family understand what he wants		
8 Remembers little songs and rhymes		
9 Dresses himself most of the time		
10 Washes his face and hands himself		
11 Can manage to visit the toilet by himself		
12 Can hear a watch ticking when held near his ear		
13 Can see a straight pin on the floor when standing up		
14 Likes to draw with crayons or paints at home		
15 Has had an opportunity to use scissors at home		
16 Can go short message by himself e.g. to buy a newspaper, sweets, or an ice-cream		
17 Likes to help with little household tasks		
18 Chooses his own TV programme		
19 Watches TV programmes with interest and likes to talk about them		
20 Is interested in looking at books		
21 Likes to have stories read to him		
22 Seems to worry a great deal		
23 Cries very easily when upset		
24 Likes to play with other children		
25 Is very quiet most of the time		

	Yes	No
26 Really likes best to play by himself		
27 Can manage to look after his own belongings		
28 Is careful when using other children's belongings		
29 Often has temper tantrums when upset or corrected		
30 Is very restless or active, never stays still for a moment		
31 Is rather frightened of new situations		
32 Has been looking forward to school		

Do you think your child will be able to:

33 sit still and listen to the teacher read a story?		
34 listen without interrupting while another child talks?		
35 take turns on playground equipment?		
36 learn the new routine of school?		
37 remember where his bag and coat are kept at school?		
38 make friends at school?		

If you would like to give the teacher any further information, please do so here.

_____

_____

_____

_____

_____